



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO.              | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|------------------------------|-------------|----------------------|---------------------|------------------|
| 10/735,147                   | 12/12/2003  | Benjamin Atkin       | 51289/JEJ/D359      | 1566             |
| 23363                        | 7590        | 12/29/2004           | EXAMINER            |                  |
| CHRISTIE, PARKER & HALE, LLP |             |                      | O'CONNOR, CARY E    |                  |
| PO BOX 7068                  |             |                      | ART UNIT            |                  |
| PASADENA, CA 91109-7068      |             |                      | PAPER NUMBER        |                  |
|                              |             |                      | 3732                |                  |
| DATE MAILED: 12/29/2004      |             |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/735,147

Applicant(s)

ATKIN ET AL

Examiner

Cary E. O'Connor

Art Unit

3732

– The MAILING DATE of this communication appears on the cover sheet with the correspondence address –  
Period for Reply

**A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.**

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 121203.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

**DETAILED ACTION**

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 12 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 12 recites the limitation "the tapered portion" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 7, 8, 11 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Burt (3,518,766). Burt shows an ultrasonic dental insert for an ultrasonic dental tool comprising a transducer 16 for generating ultrasonic vibrations, a connecting body 34 having a proximal end and a distal end, the proximal end attached to the transducer, the distal end having an engagement portion 40 formed thereon, a handgrip 43 enveloping at least a portion of the connecting body, at least one O-ring 49 for shock absorption (column 4, lines 39-47) mounted between the connecting body and the hand

grip and around the engagement portion, and a removable tip 31 engaging the engagement portion. As to claim 2, note that the tip may be made of metal (column 3, last line to column 4, line 2). As to claim 3, note that the tip comprises an attachment portion 42 for engaging the engagement portion. As to claim 4, the tip is shown to have a tapered portion 32, 33 in Figure 1. As to claim 7, note the groove 56 formed in the tapered portion of the tip. As to claim 8, Figures 2 and 2a show the tip as having a substantially circular cross section. As to claim 11, Burt discloses that the engagement portion is a cylindrical wall defining a cavity and the attachment portion is pressure fit into the cavity (column 4, lines 21-25). As to claim 12, the tapered portion is shown, in Figure 1, including a first portion 32 generally aligned with the connecting body and a second portion 33 which is curved at an angle from the first portion.

Claims 1, 3, 4, 6-8, 12-14, 16-18, 20-22 and 25 are rejected under 35 U.S.C. 102(b) as being anticipated by Sharp et al (6,086,369). Sharp shows an ultrasonic dental insert for an ultrasonic dental tool comprising a transducer 20 for generating ultrasonic vibrations, a connecting body 18 having a proximal end and a distal end, the proximal end attached to the transducer, the distal end having an engagement portion 25 formed thereon, a handgrip 22 enveloping at least a portion of the connecting body, at least one O-ring 35 for shock absorption (column 4, lines 61-63) mounted between the connecting body and the hand grip and around the engagement portion, and a removable tip 16 engaging the engagement portion. As to claims 3 and 17, note that the tip comprises an attachment portion for engaging the engagement portion (see Figure 1). As to claims 4 and 18, the tip is shown to have a tapered portion

in Figure 1. As to claims 6 and 20, note the external tube attached along the tip. As to claims 7 and 21, note the groove 44 formed in the tapered portion of the tip. As to claims 8 and 22, Figure 5 shows the tip as having a substantially circular cross section. As to claims 11 and 25, Sharp discloses that the engagement portion is a cylindrical wall defining a cavity and the attachment portion is pressure fit into the cavity (column 4, lines 15-19). As to claim 12, the tapered portion is shown, in Figure 1, including a first portion generally aligned with the connecting body and a second portion which is curved at an angle from the first portion. As to claim 13, note the plurality of bumps 55 on the hand grip. As to claim 14, Sharp discloses a handpiece for receiving the insert and a coil for exciting the transducer (column 4, lines 22-25). As to claim 16, the dental unit of Sharp inherently has an electrical energy source and a fluid source (column 4, lines 45-55).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharp et al (6,086,369) in view of Parisi (4,169,984). The conduit for carrying fluid of Sharp is not formed by a conical wall that defines the conduit. Parisi shows an ultrasonic dental instrument comprising a tip 25 with a conduit defined by a conical wall. It would have been obvious to one of ordinary skill in the art at the time the invention

was made to form the tip of Sharp as taught by Parisi, in order to better control the direction of the fluid onto the tooth surface.

Claims 9, 10, 23 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sharp et al (6,086,369) in view of Finn (4,484,893). The attachment portion of Sharp is not threaded to engage a threaded portion of the engagement portion. Finn shows a vibratory dental handpiece having a tip 52 which has a threaded attachment portion to engage the engagement portion which is also threaded. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the engagement and attachment portions of Sharp with threads, in view of Finn, in order to provide a secure attachment between the tip and the connecting body that is less likely to come apart due to the vibrations of the instrument.

### ***Drawings***

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: 116 (Fig. 4, 5). Corrected drawing sheets are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Application/Control Number:  
10/735,147  
Art Unit: 3732

Page 6

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cary E. O'Connor whose telephone number is 571-272-4715. The examiner can normally be reached on M-Th 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin Shaver can be reached on 571-272-4720. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Cary E. O'Connor  
Primary Examiner  
Art Unit 3732

ceo